

What is Claimed is:

1. A method for processing a substrate having a conductive material formed thereon, comprising:
 - positioning the substrate in a polishing apparatus having a rotational carrier head and a rotatable platen, wherein the substrate is disposed in the rotational carrier head and the platen has a polishing article disposed thereon;
 - rotating the carrier head at a first carrier head rotational rate and rotating the platen at a first platen rotational rate;
 - contacting the substrate with the polishing article at a polishing pressure of less than about 2 psi;
 - accelerating the first carrier head rotational rate to a second carrier head rotational rate and accelerating the first platen rotational rate to a second platen rotational rate; and
 - removing a substantial portion of the conductive material from the substrate at the second carrier head rotational rate and at the second platen rotational rate.
2. The method of claim 1, further comprising decelerating the second carrier head rotational rate to a third carrier head rotational rate and decelerating the second platen rotational rate to a third platen rotational rate.
3. The method of claim 2, further comprising removing the substrate from contact with the platen.
4. The method of claim 1, wherein the first platen rotational rate is less than about 100 rpm and the first carrier head rotational rate is less than about 100 rpm.
5. The method of claim 1, wherein the second platen rotational rate is between greater than about 120 rpm and about 750 rpm or less and the second carrier head rotational rate is between greater than about 120 rpm and about 500 rpm or less.

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6. The method of claim 1, wherein the third platen rotational rate is less than about 100 rpm and the third carrier head rotational rate is less than about 100 rpm.
7. The method of claim 1, wherein the accelerating the first carrier head rotation rate is between about 5 rpm/s and about 60 rpm/s.
8. The method of claim 1, wherein the accelerating the first platen rotation rate is between about 5 rpm/s and about 60 rpm/s.
9. The method of claim 1, wherein the polishing pressure is between about 0.01 psi and about 1 psi.
10. The method of claim 10, wherein the polishing pressure is between about 0.5 psi and about 0.8 psi.
11. The method of claim 2, wherein the decelerating the second carrier head rotation rate is between about 5 rpm/s and about 60 rpm/s and the decelerating the second platen rotation rate is between about 5 rpm/s and about 60 rpm/s.
12. A method for processing a substrate having a conductive material formed thereon, comprising:
 - positioning the substrate in a rotational carrier head;
 - rotating the rotational carrier head at a carrier head rotational rate of about 80 rpm or less;
 - rotating a platen at a platen rotational rate of about 80 rpm or less, wherein the platen has a polishing article disposed thereon;
 - contacting the substrate and the polishing article at a polishing pressure between about 0.1 psi and less than about 2 psi;
 - rotating the rotational carrier head at a carrier head rotational rate between greater than about 120 rpm and about 500 rpm or less;

rotating the platen at a platen rotational rate between greater than about 120 rpm and about 750 rpm or less; and

removing a substantial portion of the conductive material from the substrate.

13. The method of claim 12, further comprising rotating the carrier head at a carrier head rotational rate of about 80 rpm or less and rotating the platen at a platen rotational rate of about 80 rpm or less.

14. The method of claim 13, further comprising removing the substrate from contact with the platen.

15. The method of claim 12, wherein the substrate in the platen are contacted at a pressure between about 0.1 psi and about 1 psi.

16. A method for processing a substrate a substrate having a conductive material formed thereon, comprising:

contacting the substrate with a polishing article at a polishing pressure of less than about 2 psi to remove a substantial portion of the conductive material, wherein the substrate is disposed in a carrier head having a first carrier head rotational rate and the substrate is contacted with a polishing material disposed on the platen having a first platen rotational rate;

reducing the first carrier head rotational rate to a second carrier head rotational rate less than the first carrier head rotational rate;

decelerating the first platen rotational rate to a second platen rotational rate less than the first platen rotational rate; and

decelerating the substrate from contact with the polishing material disposed on the platen.

17. The method of claim 1, wherein the first carrier head rotational rate is between greater than about 120 rpm and about 500 rpm or less, and the second carrier head rotational rate is less than about 100 rpm.

18. The method of claim 1, wherein the first platen rotational rate is between greater than about 120 rpm and about 750 rpm or less, and the second platen rotational rate is less than about 100 rpm.

19. The method of claim 1, where the polishing pressure is between about 0.01 psi and about 1 psi.

20. The method of claim 17, wherein the decelerating the first carrier head rotation rate is between about 5 rpm/s and about 60 rpm/s and the decelerating the first platen rotation rate is between about 5 rpm/s and about 60 rpm/s.

21. A method for processing a substrate having a conductive material formed thereon, comprising:

- positioning the substrate in a polishing apparatus having a rotational carrier head and a platen, wherein the substrate is disposed in the rotational carrier head and the platen has a polishing article disposed thereon;

- rotating the carrier head at a first carrier head rotational rate and providing a first linear velocity;

- contacting the substrate with the polishing article at a polishing pressure of less than about 2 psi;

- accelerating the carrier head rotational rate to a second carrier head rotational rate and accelerating the first linear velocity to a second linear velocity;
- and

- removing a substantial portion of the conductive material from the substrate at the second carrier head rotational rate and at the second linear velocity.

22. The method of claim 21, further comprising decelerating the second carrier head rotational rate to a third carrier head rotational rate and decelerating the second linear velocity to a third linear velocity.

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23. The method of claim 22, further comprising removing the substrate from contact with the platen.
24. The method of claim 21, wherein the first linear velocity is less than about 471 ft/min and the first carrier head rotational rate is less than about 100 rpm.
25. The method of claim 21, wherein the second linear velocity is between greater than about 560 ft/min and about 3500 ft/min or less and the second carrier head rotational rate is between greater than about 120 rpm and about 500 rpm or less.
26. The method of claim 21, wherein the third linear velocity is less than about 471 ft/min and the third carrier head rotational rate is less than about 100 rpm.
27. The method of claim 21, wherein the accelerating the first carrier head rotation rate is between about 5 rpm/s and about 60 rpm/s.
28. The method of claim 21, wherein the accelerating the first linear velocity is between about 1400 ft/min² and about 17000 ft/min².
29. The method of claim 21, wherein the polishing pressure is between about 0.01 psi and about 1 psi.
30. The method of claim 29, wherein the polishing pressure is between about 0.5 psi and about 0.8 psi.
31. The method of claim 22, wherein the decelerating the second carrier head rotation rate is between about 5 rpm/s and about 60 rpm/s and the decelerating the second linear velocity is between about 1400 ft/min² and about 17000 ft/min².